

REMARKS

Applicant respectfully requests consideration of this application in view of the foregoing amendments and following remarks.

A. Claim Status / Explanation of Amendments

Claims 1-38 are pending, of which claims 1-11, 13-15, 24, 27-35, and 37-38 were rejected while claims 12, 16-23, 25-26, and 36 were withdrawn from consideration as a result of a previous restriction requirement. Applicant reserves the right to pursue withdrawn claims in a divisional application. As to the merits, claims 1-6, 13-15, 24, 27-30, and 37-38 were rejected pursuant to 35 U.S.C. § 102(b) as allegedly being anticipated by WO 98/20020 to O'Donnell, et al. ("O'Donnell"). [8/9/07 Office Action, p. 3]. Claims 1, 6-11, 27, and 31-35 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over O'Donnell in view of U.S. Patent No. 6,124,099 to Heckman, et al. ("Heckman"). [8/9/07 Office Action, p. 9].

By this paper, claims 1, 8, 10, 15, 24, 27, 32, and 34 are amended and claims 6-7 and 30-31 are canceled without prejudice or disclaimer. Applicant reserves the right to pursue canceled claims in a continuing application. Claim 1 is amended to incorporate the elected limitations (Formula II) of canceled claims 6 and 7 whereas claims 15, 24 and 27 are amended to include the elected limitations (also Formula II) of canceled claims 30 and 31. Claims 8 and 10 are amended to depend from claim 1 instead of claim 7 while claims 32 and 34 are amended to depend from claim 27 instead of claim 31 with all references to formula I in these claims being deleted.

No new matter will be introduced into this application by entry of these amendments. Entry is respectfully requested.

B. Claims 1-11, 13-15, 24, 27-35, and 37-38 are Patentable over the Cited References

Applicant respectfully traverses the 35 U.S.C. § 102(b) rejection of claims 1-6, 13-15, 24, 27-30, and 37-38 as allegedly being anticipated by O'Donnell and the 35 U.S.C. § 103(a) rejection of claims 1, 6-11, 27, and 31-35 as allegedly being obvious over O'Donnell in view of Heckman. As set forth in detail below, O'Donnell and Heckman, whether alone or in combination, do not teach, disclose, or suggest each and every element of these claims. Accordingly, the Section 102 and 103 rejections are respectfully traversed.

Applicant's claim 1, as amended, recites:

1. A method of acquiring data on the mass of a substance fixed on a substrate, comprising the steps of:

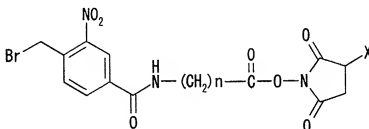
using a structure including a partial structure to be disconnected by light to fix the substance on the substrate;

irradiating the substance fixed on the substrate with light for inducing the disconnection of the partial structure to be disconnected by light; and

analyzing the mass spectrum of the substance which is brought in an unfixed state by disconnecting the partial structure by the irradiation of light,

wherein a structure containing nitrobenzene is selected as the partial structure to be disconnected by the irradiation of light, and

wherein the structure containing nitrobenzene is constructed with a compound represented by the following formula II:



Formula II

(wherein n is 3 to 5, and X is H or SO₃Na).

O'Donnell is directed to a process for immobilizing a high density of nucleic acids on an insoluble surface which is useful for mass spectrometric detection of nucleic acids. [O'Donnell, Abstract]. The Office Action recognizes and asserts that O'Donnell fails to teach a structure containing nitrobenzene which is constructed with the aminoalkanoate of formula II. [8/9/07 Office Action, p. 10]. In attempting to remedy this deficiency, the Office Action refers to Heckman which is directed, *inter alia*, to methods for identifying novel, sequence-specific target molecules using photoactive ribonucleotides that contain photo-crosslinking agents placed at specific internal positions within a ribonucleotide. [8/9/07 Office Action, p. 10].

The Office Action contends that Heckman teaches the use of succinimidyl 6-(4-bromomethyl-3-nitrobenzoyl) amino hexanoate as a photo-crosslinking agent and that it would have been obvious to combine Heckman with O'Donnell's nucleic acid detection process to obtain Applicant's method of analyzing a substance fixed on a substrate. However, Applicant is not directed to a method in which light irradiation results in crosslinking of target molecules, but rather is directed to photo-induced dissociation of a partial structure. More specifically, Applicant utilizes a succinimidyl 6-(4-bromomethyl-3-nitrobenzoyl) aminoalkanoate compound (formula II) to construct a nitrobenzene-containing structure which is "selected as the partial structure to be disconnected by the irradiation of light" as recited in amended claim 1. As such, one of ordinary skill in the art would not be motivated to use formula II to construct a photo-cleavable structure based on the teachings of O'Donnell or Heckman nor would one have a reasonable expectation of success.

Accordingly, O'Donnell and Heckman whether alone or in combination fail to teach, disclose, or suggest a method of "irradiating the substance fixed on the substrate with light for inducing the disconnection of the partial structure to be disconnected by light," wherein a

nitrobenzene-containing structure is "selected as the partial structure to be disconnected by the irradiation of light," and wherein the nitrobenzene is "constructed with a compound represented by the following formula II" as recited in Applicant's amended claim 1. Applicant respectfully submits that independent claim 1 is patentably distinct from O'Donnell and Heckman for at least this reason. Since independent claims 15, 24, and 27 also include the limitation wherein the nitrobenzene is "constructed with a compound represented by the following formula II" they are asserted to be patentably distinct for at least similar reasons. Dependent claims 2-5, 8-11, 13-14, 28-29, 32-35, and 37-38 are also in condition for allowance for at least similar reasons. Claims 6-7 and 30-31 are canceled, thereby rendering the rejection of these claims as moot. The rejections for anticipation and obviousness should therefore be withdrawn. Applicant submits that all of the pending claims are now allowable for the above reasons and early, favorable action in that regard is respectfully requested.

Applicant has chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Furthermore, Applicant has not specifically addressed the rejections of the dependent claims. Applicant respectfully submits that the independent claims from which they depend are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicant, however, reserves the right to address such rejections of the dependent claims in the future as appropriate.

CONCLUSION

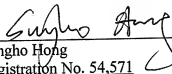
For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is earnestly solicited. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1232-5564.

Respectfully submitted,
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Dated: November 9, 2007

By: _____


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